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REMARKS

I. Status of Claims/Amendments

Claims 1-30 are currently pending. Upon entry of this preliminary amendment, claims 8-22 are canceled without prejudice or disclaimer to reinstatement in this or another application and new claims 31-37 are added. Further, claims 1, 5, 23, 24, 27 and 28 are amended without prejudice or disclaimer upon entry of this amendment.

Claims 1 and 5 have simply been reworded to describe more succinctly the subject matter of these claims. Claims 23 and 27 simply clarify the meaning of the abbreviation PL (see, e.g., page 50, lines 1-2). Claim 24 incorporates the elements of claim 21 upon which this claim was intended to depend (see, e.g., page 83, line 19 to page 84, line 26).

The new claims are supported throughout the specification, including, for example, at the following sections:

Claims 31-34: at pages 69-72; and original claims 1-4.

Claims 35-37: at page 76, line 9 to page 77, line 15; and original claims 5-7.

II. Response to Restriction Requirement

In response to the Restriction Requirement, Applicants provisionally elect, with traverse, Group VII, including claims 23-26, and new claims 31-37 which directly or indirectly depend upon claim 23.

This election is made with traverse for several reasons. First, it is respectfully submitted that the claims in Groups I, II, and VIII should be examined together with the claims in elected Group VII. The claims in these four groups should be examined together because the search of the claims in Groups I, II and VIII will be largely coextensive with the search of the claims in elected Group VII because the methods are closely related. For example, independent claim 23 of elected Group VII includes a "contacting" step and a "detecting" step. Similarly, independent claims 1 and 5 of Groups I and II, respectively, include related steps. More specifically, the

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"immobilizing" and "contacting" steps of independent claims 1 and 5 from Groups I and II, respectively, are related to the more general "contacting" step of claim 23. Likewise, the "determining" and "calculating" steps in Groups I and II are related to the "detecting" step of claim 23. Thus, the search of the generalized method described in claim 23 from elected Group VII will necessarily include many of the aspects of the more detailed methods described in independent claims 1 and 5 from Groups I and II.

The similarity in searches between the claims in elected Group VII and those in Group VIII is even more apparent. This is the case because the base claims from Group VIII (i.e., claims 27 and 28) involve performing the identical method as described in independent claim 23 from elected Group VII, with the addition of an additional element. Thus, the Examiner will necessarily have to search the method as described in base claims 27 and 28 from Group VIII when searching the method described in Group VII.

The fact that the claims in Groups I, II, VII and VIII have all been classified by the Office to the same class and subclass is further evidence that the search for the claims in one group will largely overlap with the search of claims in another group.

For all these reasons, it is respectfully submitted that it would not be an undue burden on the Office to examine the claims in Groups I, II, VII and VIII together.

If despite the foregoing reasons the Office will not examine the claims in Groups I, II, VII and VIII together, it is requested that the Office at least examine the claims in Groups VII and VIII together. As just explained, in searching the base claim in elected Group VII, the Examiner will necessarily have to search the base claims in Group VIII. Thus, it is respectfully submitted that searching the claims in these two groups would not unduly burden the Office. Accordingly, the claims in Group VII and VIII should be examined together.

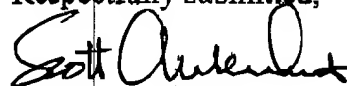
If the Examiner believes a telephone conference would expedite

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prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,



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APPENDIX A

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The following claims have been amended without prejudice or disclaimer as indicated below:

1. (Once amended) A method of determining the apparent affinity (K_d) of binding between a PDZ domain and a ligand, comprising
 - ~~(a) immobilizing a polypeptide comprising the PDZ domain and a non-PDZ domain on a surface;~~
 - (a)(b) contacting the an immobilized polypeptide comprising the PDZ domain and a non-PDZ domain with a plurality of different concentrations of the ligand; and
 - (b)(e) determining the amount of binding of the ligand to the immobilized polypeptide at each of the concentrations of ligand; ligand, whereby the apparent affinity of binding between the PDZ domain and the ligand is determined.
 - ~~—(d)—calculating the apparent affinity of the binding from the binding determined in (e).~~
2. The method of claim 1, wherein the polypeptide is immobilized by binding the polypeptide to an immobilized immunoglobulin that binds the non-PDZ domain.
3. The method of claim 1, wherein the polypeptide comprising the PDZ domain is a fusion protein.
4. The method of claim 3, wherein the fusion protein is a GST-PDZ domain fusion protein.

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5. (Once amended) A method of determining the K_i of an inhibitor or suspected inhibitor of binding between a PDZ domain and a ligand, comprising

~~(a) immobilizing a polypeptide comprising the PDZ domain and a non-PDZ domain on a surface;~~

~~(a)(b)~~ contacting the an immobilized polypeptide comprising the PDZ domain and a non-PDZ domain with a plurality of different mixtures of the ligand and inhibitor, wherein the different mixtures comprise a fixed amount of ligand, at least a portion of which is detectably labeled, and different concentrations of the inhibitor; and

~~(b)(e)~~ determining the amount of ligand bound at the different concentrations of ~~inhibitor~~; inhibitor, whereby the K_i of the inhibitor is determined.

~~(d) calculating the K_i of the inhibitor from the binding determined in (c).~~

6. The method of claim 5 wherein the polypeptide is immobilized by binding the polypeptide to an immobilized immunoglobulin that binds the non-PDZ domain.

7. The method of claim 6 wherein the fixed amount of ligand is between about 0.01 Kd and about 2 Kd.

8 -22. Canceled.

23. (Once amended) A method for identifying an interaction between a PDZ domain and a ~~PL~~ PDZ Ligand protein (PL protein) comprising contacting ~~a~~ the PL protein to a plurality of ~~PDZ-containing~~ PDZ-containing polypeptides and detecting binding of at least one PL protein to ~~a PDZ~~ one or more of the plurality of PDZ-containing polypeptides.

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24. (Once amended) The method of claim 23 wherein the contacting occurs on ~~the~~ an assay device ~~of claim 1~~ that comprises the plurality of PDZ-containing polypeptides, which polypeptides include PDZ domains of different sequence and are organized in an array.

25. The method of claim 23 wherein an interaction between a PDZ and more than one PL is detected.

26. The method of claim 23 wherein an interaction between a PL and more than one PDZ is detected.

27. A method for identifying a modulator of an interaction between a PDZ and a ~~PL~~ PDZ Ligand protein (PL protein) comprising carrying out the method of ~~claims~~ claim 23 in the presence and absence of a test compound and detecting a difference in at least one PDZ-PL interaction in the presence and absence of the test compound.

28. A method for identifying a modulator of an interaction between a PDZ and a ~~PL~~ PDZ Ligand protein (PL protein) comprising carrying out the method of claim 24 in the presence and absence of a test compound and detecting a difference in at least one PDZ-PL interaction in the presence and absence of the test compound.

29. The method of claim 27 wherein the modulator is an enhancer of the interaction.

30. The method of claim 27 wherein the modulator is an inhibitor of the interaction.

The following new claims have been added.

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--31. (New) The method of claim 23 wherein

(a) the plurality of PDZ-containing polypeptides are immobilized at different locations of an array;

(b) contacting comprises contacting the immobilized PDZ-containing polypeptides of the array with a plurality of different concentrations of the PL protein; and

(c) detecting comprises deterring the amount of binding of the PL protein to the immobilized polypeptide(s) at at least one of the locations at each of the concentrations of PL protein, whereby the apparent affinity of binding between the PDZ-containing polypeptide and the PL protein is determined.

32. (New) The method of claim 31 wherein the PDZ domain-containing polypeptides each comprise a PDZ domain and a non-PDZ domain that is bound to an immobilized immunoglobulin attached to a surface of the array.

33. (New) The method of claim 31 wherein the PDZ domain-containing polypeptides are fusion proteins.

34. (New) The method of claim 33 wherein the fusion proteins are GST-PDZ domain fusion proteins.

35. (New) The method of claim 23 wherein

(a) the plurality of PDZ-containing polypeptides are immobilized at different locations of an array;

(b) contacting comprises contacting the immobilized PDZ-containing polypeptides of the array with a plurality of different mixtures of the PL protein and an inhibitor, the mixtures comprising a fixed amount of PL protein; at least a portion of which is detectably labeled, and different concentrations of inhibitor; and

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(c) detecting comprises deterring the amount of binding of the PL protein to the immobilized polypeptide(s) at at least one of the locations at each of the concentrations of inhibitor, whereby the K_i of the inhibitor is determined.

36. (New) The method of claim, wherein the PDZ domain-containing polypeptides each comprise a PDZ domain and a non-PDZ domain that is bound to an immobilized immunoglobulin attached to a surface of the array.

37. (New) The method of claim, wherein the fixed amount of PL protein is between about 0.01 Kd and about 2 Kd.--

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